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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,769	09/29/2000	Katsuhiko Takahashi	35.C14833	8654

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 05/01/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

1-7-9

Office Action Summary

Application No.

09/672,769

Applicant(s)

AKAHASHI ET AL.

Examiner

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. All outstanding rejections except for those described below are overcome by applicants' amendment filed 2/13/02. Further, all objections with respect to the drawings are also overcome by applicants' amendment.

The new grounds of rejection as set forth below are necessitated by applicants' amendment, and thus, the following action is final.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al. (U.S. 6,031,019) in view of Suzuki et al. (U.S. 6,153,001).

Tsutsumi et al. disclose an aqueous ink jet ink comprising 0.1-15% polyhydric alcohol, 0.5-5% urea, and pigment fine particle encapsulated into fine polymer particles. It is noted that the broad disclosure of pigment clearly encompasses the use of carbon black. It is further disclosed that not all the colorant present in the ink is encapsulated into the polymer. Thus, it is clear that the ink of Tsutsumi et al. contains pigment and color-containing polymer as presently claimed. It is further disclosed that the fine polymer particles include those obtained from cationic monomers. There is also disclosed an ink jet ink printing method wherein the above inks are placed in an ink jet printer comprising an ink cartridge and then jetted onto a substrate (col.3, lines 49-50, col. 3, line 64-col.4, line 12, col.4, lines 20-22, col.6, lines 34-36 and 41-45, col.11,

lines 38-44 and 61-67, col.13, line 31, col.14, lines 41-47, and col.15, lines 40-42). Although there is no explicit disclosure of ink container, it is clear that the ink jet printer would intrinsically possess this component in order to store the ink.

The difference between Tsutsumi et al. and the present claimed invention is the requirement in the claims of (a) specific type of urea and (b) specific type of pigment.

With respect to difference (a), on the one hand, the broad disclosure by Tsutsumi et al. of urea clearly encompasses all types of urea including ethylene urea and propylene urea as presently claimed. Therefore, absent evidence to the contrary, it therefore would have been obvious to one of ordinary skill in the art to choose urea, including that presently claimed, and thereby arrive at the claimed invention.

On the other hand, Suzuki et al., which is drawn to ink inks, disclose the use of 0.5-15% ethylene urea in order to prevent nozzle clogging. Further, Suzuki et al. disclose the equivalence and interchangeability of urea, as disclosed by Tsutsumi et al., with ethylene urea.

In light of the motivation for using ethylene urea disclosed by Suzuki et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to ethylene urea in the ink jet ink of Tsutsumi et al. in order to produce an ink which will not clog the printer nozzles, and thereby arrive at the claimed invention.

With respect to difference (b), Tsang et al., which is drawn to ink jet inks, disclose the use of carbon black treated with cationic groups in order to produce an ink which is both waterfast and non-flocculating (col.2, lines 45-49 and col.5, lines 16-26).

Alternatively, Johnson et al. disclose the use of self-dispersing pigment suitable for use in ink jet inks wherein the pigment comprises carbon black having at least one attached cationic

group and wherein the motivation for using such pigment is that it produces an ink with improved waterfastness. Further, Johnson et al. disclose that the ink jet ink utilizing such treated pigment have improved optical density as compared to inks which comprise untreated pigments (col.4, lines 18-24, col.7, lines 41-57, and col.12, lines 1-14 and 52).

In light of the motivation for using specific type of pigment disclosed by either Tsang et al. or Johnson et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such pigment in the ink jet ink of Tsutsumi et al. in order to produce an ink which is both waterfast and non-flocculating or, alternatively, has improved waterfastness and optical density, and thereby arrive at the claimed invention.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. 6,153,011) in view of either Tsutsumi et al. (U.S. 6,031,019).

The rejection is adequately set forth in paragraph 14 of the office action mailed 9/13/01, Paper No. 7, and is incorporated here by reference.

Additionally, with respect to newly amended claim 4, it is noted that col.7, line 63 disclose that the pigment include carbon black.

Response to Arguments

5. Applicants' arguments regarding Sacripante et al. (U.S. 6,251,987), Shintani et al. (U.S. 4,623,689), and Ito (U.S. 5,693,126) have been full considered but they are moot in view of the discontinuation of these references as applied against the present claims.

6. Applicants arguments filed 2/19/02 have been fully considered but with the exception of arguments relating to Sacripante et al., Shintani et al., and Ito et al., they are not persuasive.

Specifically, applicants argue that Suzuki et al. and Tsutsumi et al. are no longer relevant references against the present claims in light of the comparative data set forth in the amendment.

Page 21 of the amendment sets forth an additional example, i.e. ink composition of comparative example 2, which is compared with the ink of example 3 (found on page 53 of the present specification). In this comparison, an ink within the scope of the present claims, i.e. comprising ethylene urea, is compared with ink outside the scope of the present claims but within the scope of Suzuki et al. or Tsutsumi et al., i.e. comprising urea. It is shown that the ink of the present invention is superior in terms of storage stability.

However, “the arguments of counsel cannot take the place of evidence in the record”, *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner’s position that the arguments provided by the applicant regarding the criticality of ethylene urea must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), “the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001”.

In light of the above and in order to properly provide clear and convincing evidence in support of applicant’s arguments, it is the examiner’s position that the data and arguments presented by the applicant regarding the criticality of the ethylene urea be set forth in a declaration.

Further, it is noted that applicants state that the ink of the present invention has storage stability “A” while the comparative ink has storage stability “B”. It is not clear what “A and B”

mean. Page 22 of the amendment discloses that the ink was evaluated “B” if aggregation or increased viscosity was observed after incubating the ink for two weeks while the ink was evaluated as “A” if no aggregation or increased viscosity was observed. However, given that there is no specificity disclosed with regards to “A” and “B”, it is not clear if the difference is truly unexpected and surprising. Is an ink only evaluated as an “A” if no aggregation or no increase in viscosity occurs or can some aggregation or viscosity increase occur? If so, how much aggregation or viscosity increase is allowed for the ink to still be rated “A”? What is the difference between “A” and “B”? If for instance, an ink evaluated as “B” shows increase of viscosity of only 1% while the ink evaluated as “A” shows no increase, this small difference would not be unexpected or surprising. Clarification is requested.

NOTE: Although such declaration as described above will reach the examiner after the mailing of this final rejection, nevertheless, such evidence will be considered.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie Shosho
April 30, 2002


VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700